

CLAIMS

1. An image reading apparatus comprising: a light source for illuminating an image reading region extending in a primary scanning direction;
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a case for accommodating the light source;

a substrate including a first side edge and a second side edge spaced from each other in a secondary scanning direction which is perpendicular to the primary scanning direction, the
10 substrate being mounted to the case;

a plurality of sensor IC chips for detecting light traveling from the image reading region, the sensor IC chips being mounted on a principal surface of the substrate at positions closer to the second side edge than to the first side edge;

15 a wiring pattern formed on the substrate; and

a plurality of wires electrically connecting the sensor IC chips and the wiring pattern to each other;

wherein each of the wires is connected to the wiring pattern by extending from a corresponding one of the sensor IC chips
20 toward the first side edge of the substrate.

2. The apparatus according to claim 1, further comprising a light guide for guiding light emitted from the light source to the image reading region, wherein the case is provided with
25 a partition wall for separating the light guide and the sensor IC chips, and wherein the partition wall is spaced from the substrate.

3. The apparatus according to claim 2, wherein the light guide is made of transparent resin.

5 4. The apparatus according to claim 2, wherein the partition wall includes a flat surface extending parallel to the principal surface of the substrate, and wherein the wires enter between the flat surface and the principal surface of the substrate at least partially.

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5. The apparatus according to claim 2, further comprising a reflector held in contact with the light guide to prevent light from leaking from the light guide, wherein the reflector is provided on the partition wall.

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6. The apparatus according to claim 1, wherein the plurality of sensor IC chips are arranged in a straight row, and wherein the wiring pattern includes a conductive path which extends across the row of the sensor IC chips and a conductive path
20 which does not extend across the row of the sensor IC chips.

7. The apparatus according to claim 1, wherein each of the sensor IC chips is provided with a plurality of connection pads, and a plurality of light receiving portions arranged in a straight
25 row, and wherein the connection pads are arranged at positions offset toward the first side edge of the substrate with respect to the light receiving portions.

8. The apparatus according to claim 1, further comprising a connector for external connection attached to the first side edge of the substrate, wherein the connector is electrically
5 connected to the wiring pattern.

9. A circuit board unit comprising a substrate including a first side edge and a second side edge spaced from each other;
a plurality of sensor IC chips mounted on the substrate
10 at positions closer to the second edge than to the first edge;
a wiring pattern formed on the substrate; and
a plurality of wires electrically connecting the sensor IC chips and the wiring pattern to each other;
wherein each of the wires is connected to the wiring pattern
15 by extending from a corresponding one of the sensor IC chips toward the first side edge of the substrate.

10. The unit according to claim 9, wherein each of the sensor IC chips is provided with a plurality of connection pads, and
20 a plurality of light receiving portions arranged in a straight row, and wherein the connection pads are arranged at positions offset toward the first side edge of the substrate with respect to the light receiving portions.